

PROPOSED USE OF THE PLENARY POWERS TO DESIGNATE
A TYPE-SPECIES FOR THE NOMINAL GENUS *CHAITOPHORUS*
C. L. KOCH, 1854, A GENUS BASED UPON A
MISIDENTIFIED TYPE-SPECIES (CLASS INSECTA, ORDER
HEMIPTERA). Z.N.(S.) 1003

By D. Hille Ris Lambers (*Bladhuisonderzoek, T.N.O., Bennekom, Netherlands*)
and H. L. G. Stroyan (*Plant Pathology Laboratory, Ministry of Agriculture,
Fisheries & Food, Harpenden, England*)

1. The purpose of the present application is to ask for a Ruling from the International Commission on the question of which species is to be accepted as the type-species of the nominal genus *Chaitophorus* C. L. Koch, 1854. The originally included nominal species which was later designated as the type of the genus was quite clearly misidentified by Koch.

2. In 1758 Linnaeus (*Syst. Nat.* (ed. 10) 1 : 453) published *Aphis populi* as a nomen nudum with only the words "*A. populi tremulae* Habitat in *Populo tremula*". The name *Aphis populi* was later provided by Linnaeus with two more ample descriptions: (1) 1761 (*Fauna Svecica* (ed. 2): 261) which reads "Corpus ovatum, lividum, maximum, margine utrinque punctis 5 albis prominulis. Cornicula nulla. Alarum rudimenta acuta"; and (2) 1767 (*Syst. Nat.* (ed. 12) 1 : 736) which read "Habitat in *Populo tremula*, sub foliis fornicatis".

3. C. L. Koch, 1854 (*Die Pflanzenläuse, Aphiden*: 1) published the new generic name *Chaitophorus* without designating a type-species. In his generic diagnosis he wrote "Honigröhrchen. Sehr kurz, dick, stumpf, nicht so lang als dick". Amongst the species included in the genus he listed (*ibid.*: 12) "*Ch. populi* L.". His description of this species contains the reference "Kaltenbach p. 126", but no similar reference to Linnaeus. Koch's description and figure (Pl. 3, figs. 16, 17) are of a species agreeing with his generic diagnosis in having short stumpy siphunculi (Honigröhrchen of Koch, cornicula of Linnaeus).

4. The first person to designate a type-species for *Chaitophorus* Koch was Gerstaecker, 1856, (*Arch. Naturgesch.* 1854 : 162) who so indicated *Aphis populi* Linnaeus. Passerini, 1860 (*Gli Afidi*: 28), in apparent ignorance of Gerstaecker's action, cited *Aphis aceris* Fabricius, another of Koch's originally included species, as the type-species. Van der Goot, 1913 (*Tijdschr. Ent.* 56 : 150), evidently also unaware of Gerstaecker's and Passerini's citations, selected yet another of Koch's originally included species, *Ch. leucomelas* Koch, to be the type-species.

5. It appears certain that the species *Chaitophorus populi* Linnaeus of Koch, 1854, is not the same species as that described as *Aphis populi* by Linnaeus, since this species was described in 1761 as having no siphunculi, whereas the species placed by Koch in *Chaitophorus* all possess well-developed if short and stumpy siphunculi. Hille Ris Lambers (in Danielsson, 1974, *Ent. Tidskr.* 95 : 70) has concluded that of the known species of aphids living on *Populus tremula* L. only *Pachypappa grandis* Tullgren, 1925, accurately

agrees with Linnaeus's descriptions. It also appears that Koch took his concept of *populi* L. not from Linnaeus' own writings, but from those of Kaltenbach, 1843 (*Monographie der Pflanzenläuse*: 126). This is to be inferred from the fact that Koch's description of *Ch. populi* contains the page reference to Kaltenbach, but not one to Linnaeus, although very many other Linnaean species treated by Koch do have page references to *Systema Naturae* or (rarely) to *Fauna Svecica*.

6. The generic name *Chaitophorus* Koch has been consistently used in a sense agreeing with Koch's description, i.e. for species with short, thick, stumpy siphunculi. But the species originally selected as type-species by Gerstaecker, *Ch. populi* (L.) of Koch but not of Linnaeus, has not been consistently interpreted. It has rather commonly been regarded as identical with *Aphis populeti* Panzer, 1805, but this was not accepted by C. Börner, 1952 (*Europae centralis Aphides*, *Mitt. thuring. bot. Ges.*, Beiheft 3 : 220), who believed that Panzer described another species also generally placed in *Chaitophorus* Koch. The species chosen as type-species by Passerini, *Ch. aceris* (F.) of Koch, is a mixture of two species, now both placed in the genus *Periphyllus* van der Hoeven, 1863. The consequence of accepting this fixation would therefore be to cause the name *Chaitophorus* to be applied to, and to replace, *Periphyllus*, which in view of the close relationship of the two genera would result in great confusion. On the other hand *Chaitophorus leucomelas* Koch, 1854, selected as type-species of *Chaitophorus* by van der Goot, has never been misidentified. Börner (1952) transferred it to the genus *Eichochaitophorus* Essig, 1912, but all later authors consider *Eichochaitophorus* to be a junior subjective synonym of *Chaitophorus* Koch. *Chaitophorus leucomelas* is one of the commonest species of the genus *Chaitophorus* in Europe, and is also rather widely distributed in North America.

7. Article 70 of the International Code requires that, where a type-species is held to have been misidentified by the author of a genus, the case be referred to the International Commission with a request that it should designate as type-species whichever species will in its judgment best serve stability and uniformity of nomenclature.

8. We therefore ask the International Commission on Zoological Nomenclature:

- (1) to use its Plenary Powers to set aside all designations of type-species for the genus *Chaitophorus* C. L. Koch, 1854, prior to the Ruling now requested, and, having done so, to designate *Chaitophorus leucomelas* C. L. Koch, 1854, to be the type-species of this genus, as proposed originally by van der Goot (1913);
- (2) to place the generic name *Chaitophorus* C. L. Koch, 1854 (gender: masculine; type-species, by designation under the Plenary Powers in (1) above, *Chaitophorus leucomelas* C. L. Koch, 1854) on the Official List of Generic Names in Zoology;
- (3) to place the specific name *leucomelas* C. L. Koch, 1854, as published in the binomen *Chaitophorus leucomelas* (type-species of *Chaitophorus* C. L. Koch, 1854, by designation under the Plenary Powers in (1) above) on the Official List of Specific Names in Zoology.